

IN THE CLAIMS:

1. (currently amended) A negative electrode for a lithium secondary battery prepared by forming an active material layer comprising active material particles of silicon and/or a silicon alloy and a binder on a current collector comprising an electrically conductive metal foil, and sintering the active material layer on the current collector under a non-oxidizing atmosphere at a temperature in the range of 300 - 450°C, wherein said active material particles are primary particles having a mean diameter of not greater than 1 μm , the primary particles are dispersed uniformly in the active material layer, the binder is a polyimide, and the primary particles and the binder are uniformly mixed and distributed.

2. (original) The negative electrode according to claim 1, wherein the active material is silicon.

3. (original) The negative electrode according to claim 1, wherein a surface roughness (Ra) of a surface of the current collector is at least 0.2 μm .

4. (original) The negative electrode according to claim 2, wherein a surface roughness (Ra) of a surface of the current collector is at least 0.2 μm .

5. (original) The negative electrode according to claim 1, wherein the current collector is a copper foil, a copper alloy foil or a metal foil having a copper layer or a copper alloy layer on a surface thereof.

6. (original) The negative electrode according to claim 1, wherein the current collector is an electrolytic copper foil, an electrolytic copper alloy foil or a metal foil having an electrolytic copper layer or an electrolytic copper alloy layer on a surface thereof.

7. (original) The negative electrode according to claim 1, wherein the binder remains after sintering.

8. (canceled)

9. (original) The negative electrode according to claim 1, wherein an electrically-conductive powder is mixed in the active material layer.

10. (currently amended) The negative electrode according to claim 1, wherein the active material is silicon, a surface roughness (Ra) of a surface of the current collector is at least 0.2 μm , the current collector is an electrolytic copper foil, an electrolytic copper alloy foil or a metal foil having an electrolytic copper layer or an electrolytic copper alloy layer on the surface, and the binder remains after sintering, ~~and the binder is polyimide.~~

11. (currently amended) A method for preparing a negative electrode for a lithium secondary battery comprising

preparing a slurry comprising an active material in a binder solution, wherein the active material comprises silicon and/or a silicon alloy having an average diameter of primary particles of less than 1 μm and which is broken apart into the primary particles in the binder solution, and wherein the binder is a polyimide;

coating the slurry on a current collector comprising a metal foil to form an active material layer; and

sintering the active material layer on the current collector under a non-oxidizing atmosphere at a temperature in the range of 300 - 450°C.

12. (original) The method for preparing a negative electrode according to claim 11, wherein sintering is performed under conditions such that the binder remains after heat treatment.

13. (original) The method for preparing a negative electrode according to claim 11, wherein the active material layer is press rolled together with the current collector before sintering.

14. (original) The method for preparing a negative electrode according to claim 12, wherein the active material layer is press rolled together with the current collector before sintering.

15. (original) A lithium secondary battery comprising: a negative electrode according to any one of claims 1 to 10, a positive electrode comprising a positive electrode active material, and a nonaqueous electrolyte.

PATENT APPLN. NO. 10/673,348
RESPONSE UNDER 37 C.F.R. §1.111

**PATENT
NON-FINAL**

16. (original) A lithium secondary battery comprising: a negative electrode prepared by a method according to any one of claims 11 to 14, a positive electrode comprising a positive electrode active material, and a nonaqueous electrolyte.